COST and MANAGEMENT

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No. 5

FUNCTION OF ACCOUNTING CONTROLS FOR MANAGEMENT

By Willis T. Windle

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Willis T. Windle is a graduate in Engineering from Northwestern University. For six years he taught accounting at the University of Pittsburg and Penn State College. He has been employed in many accounting capacities in the U.S.A. and at present he is Treasurer and Controller of the Carborundum Company, Niagara Falls, N.Y. Mr. Windle presented this paper before the Niagara Chapter.

INDUSTRIAL UNREST TO-DAY

By R. A. Mahoney

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Richard A. Mahoney is a lecturer in the Department of Commerce, University of British Columbia. He is a graduate of the University of Manitoba where he received his B.A. degree and the Harvard Graduate School of Business Administration where he received his M.B.A.

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SOCIETY NOTES

SOCIETIES INCORPORATED IN NEW BRUNSWICK AND NOVA SCOTIA

It is with great pleasure that we announce the organization of the Society of Industrial & Cost Accountants of New Brunswick and the Society of Industrial & Cost Accountants of Nova Scotia. Legislation has been passed in their respective provinces incorporating each of these Societies and empowering them to grant the exclusive use of the designation Registered Industrial and Cost Accountant and the letters R.I.A. To the sponsors of these bills, we offer our sincerest congratulations on the results of their efforts which have extended over the past two years. These two new societies embrace a Charter membership that will be a credit to their respective provincial societies and a most welcome addition to the organization as a whole.

The successful incorporation of the Societies in New Brunswick and Nova Scotia now brings into the fold of the Society of Industrial & Cost Accountants of Canada 8 affiliated provincial societies, and provides for official recognition of the R.I.A. designation from coast to coast.

It is most gratifying to witness this continued expansion of the Society and to see that its influence in the field of industrial and cost accounting is being extended still further.

CO-ORDINATING EDUCATIONAL COMMITTEE SPONSORS EDUCATIONAL CONFERENCE

The Society of Industrial and Cost Accountants of Canada will hold its second Educational Conference in Toronto on 21st June, 1950, under the auspices of the Co-Ordinating Educational Committee.

The primary objective of the Conference will be the reconsideration and, where advisable, the amendment of the plans of our Societies for education in the fields of industrial and cost accounting and management. A further important objective will be the bringing together for mutual discussion and exchange

SOCIETY NOTES

of views instructors from the universities and industrialists interested in educational work.

The discussion will include:-

- (a) General consideration of the plan of study which should be followed in qualification for the Degree "Registered Industrial and Cost Accountant".
- (b) Critical analysis of each subject, with particular reference to the ground to be covered, the curriculum, the time to be allotted for instruction, the texts to be prescribed, interpretations of materials and developments in the field.
- (c) Examinations—Co-Ordination with University examinations.

The Conference will commence at 9.30 a.m. in the Elizabeth Room, King Edward Hotel and will convene first in general session for consideration of those matters which are fundamental to the Educational programme as a whole.

It will then break into the following groups, which will meet concurrently: — $\,$

Group	Chairman

General Accounting Dean J. H. Thompson, B.Acc., M.B.A.,

F.C.A., Saskatoon

Cost Accounting A. Van Harris, B.A., B.Comm., C.A.,

Montreal

Business Mathematics W. Darbyshire, B.A.,

Toronto

Industrial Legislation Adam C. Zimmerman, B.A.,

Hamilton

Industrial Organization D. Panabaker, B.A. Sc.

and Management Hamilton

The group meetings will require the greater part of the day, and on their conclusion the members will reassemble into the Conference as a whole to consider the recommendations of each group. It is expected that these recommendations will form the basis of further revision of the courses and the programme of study now being offered by our Societies.

All those who are interested in educational work in the field of industrial accounting will be most welcome and are invited to take part in any of the discussions. All persons who

wish to attend are requested to communicate with the Secretary-Manager not later than June 17th. Copies of the agenda for the various discussion groups will be supplied on request.

COST AND MANAGEMENT CONFERENCE NEWS

The stage is set, and the curtain is about to go up for this year's presentation of the Annual Cost and Management Conference. With headquarters at the King Edward Hotel in Toronto, June 22-24, the Conference will offer to each member of S.I.C.A., the best in the field of technical speakers, outstanding after-dinner speakers, with well-known Canadian entertainers and artists for the lighter side of the program. As if this were not enough, Charlie Warnes now informs us that on Friday afternoon, June 23, the ladies are going to have the well-known Kate Aitken join with them and talk to them when they visit the Guild of All Arts. This program together with a planned visit to the Dale Estate on Thursday afternoon, should certainly insure the ladies a most enjoyable visit to Toronto.

Each of you have now received your advance registration form and program. Owing to the attractive nature of the program and the bumper crowd expected, it would be advisable to reserve rooms at an early date, and the Registration Chairman would certainly appreciate as many early returns as possible.

We would ask that you read your program carefully. There is something of interest for each of you (and the little lady, too!) You can't afford to miss the 29th Annual Cost and Management Conference, in Toronto, in '50.

CANADIAN MANAGEMENT COUNCIL

It will be of interest to our members to know that the Society of Industrial and Cost Accountants of Canada holds membership in the Canadian Management Council. In order that our members may be better acquainted with the Council and its objectives, the following report is submitted.

The Canadian Management Council is a co-ordinating body of Canadian organizations whose membership is interested in the study of management problems.

This group of Societies felt that Canada, being a major exporting nation, should be represented in the International Management field. By this means they can better keep in touch

SOCIETY NOTES

with management thinking and trends abroad and also assist less fortunate countries and help bring them up-to-date in management methods. For this reason, these societies formed the Canadian Management Council and applied for membership in the International Committees of Scientific Management. Membership was granted in 1947.

The International Committee of Scientific Management or in abbreviated form, C.I.O.S. (Comite International de l'Organisation Scientifique), is the outgrowth of an International Management Congress held in Prague in 1924, and a similar Congress in Brussels the following year. These two congresses were so successful that the C.I.O.S. was organized as a permanent body in 1926 and under its sponsorship there have been six International Congresses held, the latest being in Stockholm in 1947. The next one is to be held in Brussels in 1951.

The C.I.O.S. membership is composed of national associations representing many European countries as well as Canada, the U.S. and Brazil. The functions of the organization are classified under three headings.

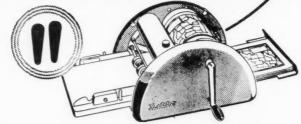
- The organization of International Management Congresses and interim regional technical conferences.
- To facilitate international collaboration in the use of the principles and techniques of scientific management through exchange of information among its members.
- Collaboration with other international bodies in the joint study of management problems.

The program of the Canadian Management Council includes participation in the 1951 International Congress. At that congress, twelve management subjects will be discussed, each one to be presented by a leading country. These studies are conducted on an international basis, with each member council presenting information concerning methods in their countries. Our Society has been asked, on behalf of the Canadian Management Council, to make a study of the subject "The Flexible and the Variable Budget". The leading country presenting this subject is the Netherlands, and the papers submitted by Canada and other member countries will serve as a base for discussion during the congress.



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CHAPTER NOTES

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Chapter Notes

FORT WILLIAM - PORT ARTHUR

James J. Coghlan presided at a dinner meeting of the Fort William -Port Arthur Chapter of the Society of Industrial & Cost Accountants of Ontario, held last Wednesday evening, at the Hi Land Inn, Port Arthur.

Following dinner, Mr. Rex LeCocq conducted a lively discussion period concerning the numerous recent amendments to the new Income Tax Act.

Mr. H. L. Faulknor, Chief Business Assessor of the local Income Tax Office, was present at the meeting and contributed greatly to the discussion.

On behalf of the members, Mr. W. J. Strachan expressed the appreciation of the Chapter to Mr. Faulknor for his attendance and thanked him for his valuable assistance.

HAMILTON CHAPTER

The annual meeting of the Hamilton Chapter was held on Thursday, April 20th, 1950. A large gathering of members and guests heard Robert L. Dixon, Professor of Accounting at the University of Michigan, give an address on "Analysis of Financial Statements".

Professor Dixon pointed out the various ratios and comparisons to look for, but added that these facts would be of little use unless the person making the investigation had comparative figures for previous years and particularly for the type of industry under scrutiny. The speaker, while stating that he was not advocating a radical change in the established accounting methods, proceeded to outline to the audience a method that would be helpful in restating a company's financial position in the light of present-day values.

LONDON CHAPTER

The final dinner meeting of London Chapter Society of Industrial & Cost Accountants was held in the Y.M.C.A. Building, on Thursday evening, the 20th of April, 1950, Mr. Alex Magee, Chairman of the Chapter, presiding.

After dinner and the usual business and Chairman's remarks, Mr. L. W. Bennett introduced the speaker of the evening, Mr. A. C. McAlpine, of Gallager Motors Limited, who gave a very instructive address on "Value of Uniform Accounting to Automobile Dealers and Manufacturers".

There was a very interesting discussion period after the address and the speaker was thanked on behalf of the Chapter by Mr. C. E. Costain.

This being the last regular meeting for the years 1949 and 1950, the Chairman thanked the Directors and Members for their co-operation for the season which was a very successful period for the Society in London.

KITCHENER CHAPTER

The regular meeting of the Kitchener Chapter of the Society of Industrial & Cost Accountants of Ontario was held at the Royal Hotel, in Guelph.

Professor E. A. Allcut of the University of Toronto, gave an interesting address on the subject, "Modern Trends in Industrial Organization and Management."

The noted speaker was introduced to the meeting by C. R. Dorschell of Galt. Professor Allcut was thanked for his talk by Rob Roy of Galt.

J. Tennant, Ontario President of the Society, paid an official visit to the gathering.

PETERBOROUGH CHAPTER

Outboard Marine & Manufacturing Co. Ltd. were hosts April 24th, 1950, to twenty-five Peterborough accountants. A guided tour of the plant from the receiving door to the shipping door provided the guests with a very interesting view of the problems involved in making and assembling precision built parts in large quantities.

In the evening the dinner meeting of the Peterborough Chapter of the Society of Industrial and Cost Accountants of Ontario was addressed by Mr. Len Bearne, chief cost accountant for Outboard Marine and the standard cost accounting system was very ably explained.

Mr. Bearne is an active member of the group and needed no introduction. The members were very appreciative of his efforts and their thanks were expressed by Mr. Blake Bell.

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Current Literature Digest

By W. W. HENDERSON, R.I.A.

A MONTHLY BONUS FOR FOREMEN BASED ON COST SAVINGS AGAINST A
FLEXIBLE BUDGET, by Marion H. Simpsen—N.A.C.A. Bulletin, Section I, April

The author's theme is the attainment of expense reduction by means of the payment of part of the expense savings to Supervisory Personnel as bonuses. The author stresses the point that a bonus of this nature stimulates expense control better than a total fixed remuneration inclusive of an amount equivalent to such bonus. To quote the author: "It is a little like a Christmas present of \$10.00 from the boss as compared to a \$2.00 a month raise. The \$10.00 present makes the boss a 'good guy' while the \$2.00 a month raise (\$12.00 a year) probably makes him an old skinflint".

The bonus computation in this article relates to the flexible budget and follows wholly orthodox lines. However, one departure seems to this reviewer to be the expression of attainment in and the computation of bonus on a percentage of performance rather than upon favourable departmental or functional variances. For example, if for a certain level of activity the actual expense has been \$4,400.00 in the past and the budget allowance is now set at \$4,000.00 the performance would be \$4,000. divided by 4,400, that is, 91% approximately. Suppose a supervisor is eligible for bonus when the expenses under his control amount to 80% or less of actual expense experienced in the past and his actual attainment is 80% then 91% minus 80% equals 11%. If his share is half per cent of base pay for each 1% performance then 11 divided by 2 equals 5.5% bonus rate. If the employee's base salary is \$400.00 a month he would earn as a bonus increment 400 times 5.5 equals \$22.00.

The design, installation and administration of such bonuses are very fully described in this article.

ACTION IN THE SHOP TO POINT UP SCRAP REPORTING, by Gilbert R. Boutin— N.A.C.A. Bulletin, Section I, April 1950.

This is a story about an effective programme instituted to reduce spoiled work. Mr. Boutin suggests that almost any Works Manager would answer the query: "Do you maintain Scrap Control?" by the statement: "Oh yes, we have monthly and weekly reports telling just how is scrap and what the cost is." But too few would really admit that a dynamic and successful approach to spoilage reduction has been made in their plant.

In the author's company they not only set up standards with which to measure spoilage occurrence but appointed one man from the factory who was familiar with manufacturing processes and whose duty it was to study spoilage reports and to direct his efforts towards getting to the "root of the trouble".

Foreman participation in the programme was invited. But that was not all—so was the participation of workmen. Displays, graphs, posters, etc., were all employed to make workmen spoilage conscious.

The author reports tangible success in his company's efforts and since spoilage means dissipated profits this company's achievement seems to well merit parallel efforts in the direction of similar attainments of many of our industrial firms.

IS UNIFORM COSTING POSSIBLE?, by R. Warwick Dobson, C.A., F.C.W.A.—The Cost Accountant (England) April 1950.

In this article the subject of uniform cost systems is incised, exposed and dissected. Personally this reviewer as an observer of the operations felt that a liberal education had been afforded; but it is not an article easy of abridgment.

The goal of uniformity is comparability and it is like the old proverb: "easier said than done". A few quotations from the article may serve the purpose of enlightenment better than a digest of it:—"Complete uniformity in the accounting system is:—

- (1) never possible on a national or industry basis;
- (2) possible in a group of companies or factories similar in all respects;
- (3) impossible in a group of companies or factories dissimilar in any respect."

"What principles then should be enunciated if uniformity is to be achieved?

Firstly, state whether costs should be determined on an actual or standard basis.

Secondly, define the elements of cost. These have been defined already, but only as a guide. In circumstances where processes are extensively mechanised, labour costs become so insignificant that their treatment as a separate element of cost is an error of the first magnitude.

Thirdly, state whether so-called overhead costs should be analysed to functions, departments, processes, machines, operations, etc.

Fourthly, state the basis upon which costs should be allocated not only to departments but to products or services.

Fifthly and finally, state whether product of service costs are to be prepared automatically or are to be calculated only if required.

It is essential if uniformity is to be achieved that variations in the organisation of staff and the layout and equipment of premises should be provided for and these variations reflected in costs. For this reason, within the framework of the principles should be enunciated for each unit participating in the uniform scheme, which allow for these special conditions. In many cases the principle applied to one unit may be quite different from that applied to another, but it will in my opinion ensure greater comparability of data than would ensue if the same principle was applied to both."

C. & M. ROUNDUP

A DIMINISHING DEPRECIATION METHOD BASED ON A SINE CURVE WORKS WITH ANY SCRAP VALUE, by Harold Benjamin, C.P.A.—The Journal of Accountancy, April 1950.

In addition to an explicit explanation of means of calculating depreciation by the employment of sine curves, the author makes a cogent comparison of this method with the ordinary diminishing balance one. This will no doubt prove of interest to Canadian readers as the latter method is now under Canadian Income Tax Law.

It probably is generally accepted in accounting circles that situations arise whereby depreciation should be greater in the earlier years of asset possession than in later years. Straight line methods in such cases do not adequately serve. The unit of production method while providing a greater recognance of machine use and value deterioration caused thereby does not allow for obsolesance. It is the author's premise that depreciation predicated on a sine curve more truthfully portrays the consumption of machine value than other methods.

The sine curve is a trigonometric method, very familiar to students of electricity. By it depreciation is heavy in the earlier years; lighter in the later years, when operating expense for the machine unit is usually heavy. The sine method allocates 50.0 per cent of total depreciation to the first one-third of useful life; 36.7 per cent of total depreciation to the second one-third of useful life; and 13.3 per cent of total depreciation to the last one-third of useful life.

The formulae for exact computation is as follows:-

"The computations involved in the use of the sine-curve method are not difficult. A table of natural trigonometric functions is required. Such a table can generally be found in any book containing tables of logarithms. 90° is first divided by the number of years of estimated life, in the preceding illustration, 10. The quotient is 9°. It is, therefore, necessary to look up the sines of 9°, 18°, 27° and so forth, which will be found to be .1564, .3090, .4540, and so on. The first factor multiplied by the total amount to be depreciated—that is, cost less scrap value—is the depreciation for the first year. The succeeding factors multiplied with total depreciation will give us the accumulated depreciation to the end of the second, third, fourth years, and so on. The write-off for any year can easily be obtained by deducting the accumulated depreciation as of the end of the year from that at the beginning.

C & M Round-Up By NORMAN R. BARFOOT, R.I.A.

UNEMPLOYMENT INSURANCE ACT RE PIECE WORK

An amendment to the Unemployment Insurance Commission Regulations issued April 4, 1950, provides for the determination of weekly earnings where the employed person is paid by the piece or on some similar basis.

The weekly earnings of an employee on piece work for any period of four weeks may be determined by his average weekly earnings for the previous four weeks and if not engaged in the same work during the previous four weeks, his weekly earnings shall be deemed equal to those payable to other persons doing similar work during the previous four weeks.

THE MANUFACTURING PICTURE IN CANADA

Two billions of dollars have been invested in plant and equipment from 1946 to 1949.

The number of people employed in factories doubled between 1939 and 1949. The present working force is estimated at 1,200,000.

In 1939, 33% of the working force was engaged in agriculture. In 1949 this percentage had dropped to 22%.

This shift from a primary economy to an industrial one has taken place in the last 50 years and during the last 10 moved at an everincreasing tempo.

INDUSTRIAL DEVELOPMENT WORK

The I.D.B. was established by Parliamentary Act in 1944 to assist in financing industrial enterprises which were unable to obtain the necessary funds from other sources.

Anyone planning to begin or already in business of manufacturing and without sufficient capital or unable to obtain sufficient money on reasonable terms may apply to the Bank for financing. However, there must be a reasonable investment on the part of the owner and the proposal must be sound in every way. Mortgages on lands and buildings shall constitute the basic security although ability to repay from prospective earnings will be taken into account. The I.D.B. has use, also, of Section 88 of the Chartered Bank Act, which includes liens on inventories and merchandise.

Repayment is usually on a medium or long-term basis, dependent on the Bank's estimate of the future for your particular industry. The rate of interest is 5% per annum and payments may be made monthly, quarterly, semi-annually or annually. Loans may be repaid also at a faster rate than contracted. There is, therefore, considerable flexibility in the entire arrangement.

The Bank maintains a staff of industrial engineers, cost accountants and legal and insurance experts who assist not only in the financing, but are available for consultation by the Bank's customers.

ELIMINATING THE CENTS

An American construction company has told its book-keepers to lop off all pennies in most of their accounts and round out figures to the nearest dollar. A 40% saving in accounting costs plus a 9% reduction in clerical staff is claimed. The rather sizable gains are probably peculiar to the industry in question, but certainly the many hours spent by industrial corporation clerks in looking for cents could be put to better use. Obviously, of course, payables must be paid as stated and cash accounts brought in balance, but the idea has merit and should be the subject of some thought by the profession at large.

Function of Accounting Controls for Management

By WILLIS T. WINDLE, Treasurer and Controller, The Carborundum Company, Niagara Falls, N.Y.

Here the author takes the reader through a series of practical problems facing the president of a mythical company to illustrate in a most interesting manner the functions of accounting methods for management control.

The function of accounting controls in respect of Management is to keep the organization on the beam. There are various types of controls which Management uses in directing the activities of a business, but we are concerned in this discussion only with those which are operative to accounting records and reports.

In my experience I have found that there are basically three fundamental principles underlying the operations of accounting controls for Management. It is not difficult to state these principles in general terms, but in order to explain more clearly to you their application I am going to ask you to visualize a company manufacturing a durable goods product which is distributed nationally through customers, warehouses and jobbers. The product is of a nature which requires servicing in the field and its distribution problems are such that warehouse stocks are required at strategic points throughout the country. Eight manufacturing plants located at some distance from the home office are required to supply these warehouses with finished and semifinished products. The management of the company consists of a president, vice-president and general sales manager, vicepresident in charge of manufacturing and a treasurer. These are in turn assisted by the usual staff organization such as personnel, engineering, legal, etc. The vice-president in charge of manufacturing has under his supervision the eight manufacturing plants and the vice-president in charge of sales is responsible for the sale and servicing of the product in the field. The treasurer is in charge of accounting, banking and credits. The president of the company is new in the organization, his predecessor having recently retired after many years of service.

One morning the treasurer came into the president's office with the monthly accounting reports and said he was becoming concerned about the inventories. He explained that the investment in inventories had been increasing for some time and the turn-over had been dropping. He also stated that the condition had become serious in the past couple of months and he had been unable to get anyone to take any corrective action.

Upon referring to the statement the president found that the balance sheet was supported by detailed information with respect to inventories by location and that inventories at the factories appeared to be excessive, so he called in the vice-president in charge of manufacturing and asked him "how come"? The vice-president in charge of manufacturing explained that in the past he had been severely criticized for not being able to make prompt deliveries of finished products and to protect himself he had built up an adequate stock of these items in each of the plants. He also explained that while the stocks were perhaps a little on the high side his action was justified because he was now in a position to fill immediately most sales department demands.

The president, upon reference to the inventory breakdown supporting the balance sheet, observed that the warehouse stocks appeared to be more than ample and called in the vicepresident in charge of sales. This gentleman in turn pointed out that the sale and demand for the various products was erratic and that heavy warehouse inventories were required to supply the customers and jobbers in the territory. The warehouse managers found it difficult to balance their stocks with this demand and frequently ran out of fast moving items. They then were obliged to call upon the factory for rush deliveries. The freight costs absorbed on the products were such that the sales manager believed it uneconomical to ship stock from one warehouse to another and therefore he had relied upon the ability of the plant to adjust their schedules to take care of shortages and emergencies. He further explained that the warehouses maintained standard stock items for their customers in their own territories but depended upon the factory to supply the warehouse with slow-moving items. Upon further discussion the president learned that neither the vice-president in charge of manufacturing nor the vice-president in charge of sales had considered himself responsible for the total investment in inven-

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tories. The factory management actually determine the inventory level in both the field and at the plant by establishing the rate of production for the various products. This rate of production frequently had been predicated upon inadequate sales data and in many instances had not been carefully reviewed by the sales department.

The president was confronted with the problem of how to bring this inventory situation under control and with establishing some practical method of keeping the situation under constant observation. After giving the matter some thought he told the vice-president in charge of manufacturing that he was responsible for inventories of supplies, raw materials and work in process at the plant and for manufacturing only those quantities of products called for by the schedule of sales requirements which had been approved by the management. He then told the sales manager that he was responsible for all finished goods inventories from the time they left the production department until they were in the hands of the customer. He also placed the responsibility for all give-aways or trial orders as well as customer engineering services upon the vice-president and sales manager. He next instructed the treasurer to prepare his accounting report on a basis which would reflect the responsibilities of each.

This situation illustrates the first principle of control which is—to record and report operating results and performance strictly in accordance with properly defined responsibilities.

So the treasurer went back to his office and with his accounting staff made a division in the profit and loss report between the manufacturing and distributing parts of the business and was immediately confronted with a multitude of problems. He had been instructed to develop his accounting presentation on a basis which would report operating results and performance according to the responsibilities delegated, and in following this down the line into the organization he found it necessary to get additional definitions of responsibility and exactly how they interlocked.

For example, he had certain responsibilities for the accounting work which was done in each of the plants and warehouses. What was his responsibility and how was it to be reflected in the accounts? The same condition existed in connection with the responsibilities of the personnel manager and the engineer-

ing department. The president defined these responsibilities and the revised report structure began to take shape. When he was through he had a balance sheet and Statement of Income for each of the divisions (and for all factories combined) in which were included the operating costs of the respective accounting, personnel and engineering department and a balance sheet and Statement of Income for the distributing end of the business which contained a proper proportion of accounting, credit, personnel and other similar costs. This had been accomplished by working out an arrangement between the vice-president in charge of manufacturing and the vice-president in charge of sales as to the margin of profit to be allowed the distributing organization for the functions they performed. These statements, when combined with certain assets, liabilities and expenses recorded on the general books presented the balance sheet and operating results of the entire company on the same basis and in the same manner as before.

At the same time he had provided for a series of statistical reports which presented the total cost of the accounting, credit, personnel and engineering departments in both the manufacturing and distributing parts of the business, to those functionally responsible for those activities. This information was obtained from departmental cost reports developed as a part of the responsibility accounting structure established for each major division of the company.

After receiving the first set of accounting reports presented on this basis the president called a meeting of the vice-president in charge of manufacturing, vice-president in charge of sales and the treasurer for a further discussion of the inventory situation. The inventories for which the vice-president in charge of manufacturing was responsible had declined substantially in amount and inventories of finished stocks and service stocks on hand had now become the responsibility of the sales manager.

It was determined that the manufacturing cycle for the various products was relatively short and that the turn-over of plant inventories should be established at approximately six times annually. After agreeing that this turn-over rate was reasonable, the vice-president in charge of manufacturing found that his inventories were still higher than necessary and that further reductions were required if he was to maintain the expected turn-over rate. He informed the president that he be-

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lieved the required inventory reduction could be accomplished within a period of approximately six months.

Examination of the vice-president's and sales manager's inventory problem indicated that stocks on hand represented in the aggregate seven months' sales requirements and in some cases were out of balance with sales demands. It was determined that the factory production schedule could provide delivery of the various product lines under normal circumstances at intervals of thirty days or less and that not more than three months' requirements of finished goods should be on hand at any time. The vice-president in charge of sales thereupon agreed that he should turn over his inventory investment at least four times annually and that on this basis his inventory investment should be reduced materially.

The president then suggested to the treasurer that the accounting statements present each month for each division the turn-over rate computed on an annual basis so that progress in inventory reduction could be watched.

The requirements thus established by the president with respect to inventory turn-over in the manufacturing and sales departments of the company were accomplished within a reasonable period of time as each of the responsible heads had been furnished with a yardstick which indicated what was expected of him and by which he could measure his performance.

Then one day the vice-president in charge of sales of our mythical company came into the treasurer's office and complained that the accounting and credit costs in the distributing end of the business were too high. The treasurer defended the costs, stating that the work was essential, the expense was reasonable and that a good accounting and credit job was being done.

The differences of opinion were not settled so they took the problem into the president's office. He asked the vice-president in charge of sales why he thought the accounting and credit costs were too high and after hearing his explanation he asked the treasurer how he knew the costs were reasonable. He found from this discussion that each of the two men had a yardstick by which he measured performance but that the yardsticks were not the same. He then instructed the treasurer to prepare an analysis of the work being done in each of the departments in

question and an estimate of the costs covering each phase of this work. When this had been completed the president, the treasurer and the vice-president and sales manager agreed as to what work was required and what it should cost to do it.

These two illustrations, namely that of establishing the inventory turn-over rate and that of establishing the cost of performing the accounting and credit work in the distribution division illustrate the second principle of control which is—to measure performance against some yardstick which will indicate trends.

This yardstick can be a predetermined estimate or budget, the previous month's or the previous year's operations, a cost per unit of product or any other yardstick which will satisfactorily indicate trends. In this instance the president and treasurer decided that budgets were the most satisfactory means of measuring performance. Budgets predicated upon reasonably sound historical and engineering data, were developed, generally agreed to be satisfactory and placed in operation.

Sometime later the president upon reviewing the accounting statements noticed that variations of budgeted performance were beginning to show an unfavorable trend while in many instances performance was better than anticipated. The general trend was unfavorable and in certain specific instances the cumulative effect of these unfavorable variances were substantial. He called the treasurer, vice-president in charge of sales and the vice-president in charge of manufacturing together and upon inquiry ascertained that in general not a great deal of attention was paid to variances from budgeted operations as long as the profit figure at the bottom of the "Income Statement" looked all right to them and nobody asked any questions. Upon further investigation, he found that the operating reports for the various responsibilities were not thoroughly understood by all those who received them and consequently little attention was given them. In some cases the budget had not been adjusted to reflect changes in operating patterns, and generally those in charge of subordinate areas of responsibility had not been followed up on out-of-line costs and expenses.

The president then instructed the vice-president in charge of manufacturing and the vice-president in charge of sales to procure satisfactory explanations of unfavorable trends in their operations from their subordinates and to take corrective action

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in all cases in which satisfactory explanations of the unfavorable trends were not given.

He also instructed the treasurer to undertake an educational program which would insure that supervisory personnel at all levels of responsibility were thoroughly acquainted with accounts and reports prepared and presented for their use and to adjust the budgets currently for changes in operation so they would adequately reflect and measure performance.

This situation illustrates the third principle of control which is—to tollow up and take immediate corrective action on adverse trends and inquire into the causes of favorable trends.

Accounting reports developed and administered in accordance with the principle presented in this discussion provide management with the basic structure for controlling its operations and keeping the organization on the beam. The principles involved in developing such a report presentation are simple. To summarize, these are as follows:

- To record and report operating results (and performance) strictly in accordance with properly defined responsibilities.
 This must be done for all levels of supervision.
- (2) To measure performance or the actual results of each operation against some predetermined yardstick which will indicate trends. The most satisfactory of these yardsticks is a carefully prepared budget.
- (3) Immediate corrective action must be taken on adverse trends indicated by the report and the causes of favorable trends ascertained. Effective management insists that conditions causing adverse trends be thoroughly analyzed and that the causes therefore be eliminated or justified.

Now that we have established these three principles of control and illustrated their application, it might be well to discuss certain matters of technique which are helpful in organizing accounting structure of the company in accordance with these principles.

It will be assumed that the accounting work is located as closely as possible to the management of the business. In other words, in a complex operation such as a factory we will assume that all of the accounting work is done at the plant and not at an office removed from the scene of activity. This is to comply with the management principle that all accounting and control in-

formation should be promptly and readily available at all times to those who use it. Accounting management then has three problems—first, how to get an accounting structure which satisfactorily meets the requirements of the principle of control; second, how to get a good workable budget; third, how to get the best use out of the resulting report.

The first of these problems involves some rather technical accounting practices, particularly where budgets are contemplated or are in use. In developing an accounting structure for control purposes, it should be kept in mind that the objective of a budget is to establish a yardstick for measuring performance. The accounting and budget structure must be developed on the same basis. The treatment and the content of the account must be the same in both cases. It, therefore, becomes extremely important that the account used be simple, easily understood and measurable.

For this reason it is a good idea to present all costs by natural expense classifications and to avoid the use of functional accounts or combination of both, such as accounts which contain more than one element of cost. An example of a functional account is repairs. In many companies all repair costs are still accumulated in one basic account which includes the cost of labor, the cost of materials and supplies and quite frequently services performed by outside contractors. Even though repairs are broken down by departments and by kind of work done, this functional type of account should be eliminated as the contents thereof do not readily permit measurement or control.

The reason for this becomes obvious when it is remembered that costs are best controlled at the point at which they are incurred. If the purchasing or engineering departments are responsible for negotiating with outside service men or contractors for repair work and the maintenance department is responsible for repair work performed within the organization, it is obviously undesirable to record all of the costs in a functional account and impossible to place the responsibility for the total cost of repairs on any one individual. Again the material and labor content of repair work fluctuates widely, depending upon the nature of the job. Therefore, it is desirable to segregate in the accounts the cost of repair labor and repair material.

This is extremely important in establishing budgets for the measurement of performance. First, because labor in every

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organization is the most important element of expense and all control procedures start by establishing controls over the number of workers and the cost of what they do. Second, in view of the importance of labor, it is extremely desirable to obtain easily and quickly from the accounts the total labor cost for the entire organization. If part of your labor costs are buried in functional accounts, this cannot be done. Third, in a great many instances, it is possible to relate other departmental costs and expenses to departmental base labor. For control purposes, it is highly desirable to use only natural expense classifications in the uniform chart of accounts.

The next important point to be remembered is that all costs should be charged to the responsibility in which they are incurred. To illustrate this point, let us take a factory maintenance department. This department is directed by maintenance foremen and does repair and maintenance work all over the plant or factory on work orders approved by plant management. In many companies it is still the practice to accumulate the cost of work done on these orders and to distribute the accumulated cost directly to the department for which the work was done. For budget and control purposes the total cost incurred by the maintenance department should first be charged by natural expense element to a series of accounts established for the maintenance department. These accounts should be arranged so that the amount of labor and the amount of materials used are segregated from the overhead expenses of the department. Provision should also be made for distributing to the work order and to the department serviced the actual materials used and the total labor and overhead costs on the basis of time spent on the job. Charges to the department serviced should be presented as a recirculated or redistributed expense and not included with directly incurred costs. This procedure will require double coding of labor and material costs for distribution purposes but I assure you that the little extra work required in the accounting department will be more than offset by expense reductions resulting from the controls made possible by this presentation.

Once this procedure has been established, it becomes possible to set up a sound budget for maintenance expenditures and to develop certain controls. For example, the total labor costs in the maintenance department can be budgeted by limiting the personnel to the number required to do scheduled main-

tenance work plus the estimated force needed to perform scheduled repair jobs. The overhead expenses of the department can be placed under constant scrutiny and studies will soon determine what these should be. The advantages to be obtained from this type of budgetary control are not possible unless the accounting structure is so designed that all costs are first charged to the point at which they are incurred.

The next point has to do with recirculated or redistributed expenses. If we follow the principle of charging all costs to the responsibility in which they are incurred, we then find that we have a group of utility departments such as power, compressed air, gas, heat, etc., a number of service departments such as auxiliary and maintenance shops and certain non-productive departments such as the general superintendent's office, inspection, etc., all of which for good accounting and cost control purposes require redistribution. These expenses, when recirculated or redistributed, should be segregated in the monthly operating statement for each department on a basis which will show clearly the amount and general source of the recirculated costs. If a clean segregation is made between incurred and recirculated expenses in the departmental operating statement, the sum of the incurred costs in all departments will present, by natural expense classification, the total of all manufacturing costs, except possibly direct materials and these may be included.

We have now discussed three important technical points which need to be considered in organizing the accounting structure so as to get the best factual presentation of accounting control information. These are: (1) the necessity of classifying costs by natural expense classification; (2) the necessity of first recording all costs in the responsibilities in which they are incurred; and (3) the necessity of making a clean-cut segregation between incurred costs and recirculated or redistributed expenses. If these three rules are followed the development of budgets will be greatly simplified.

Now how do we go about taking care of the second problem, that of getting good workable budgets? Inasmuch as budgets as such cover a great deal of territory, we shall, for practical purposes, confine this discussion to expense budgets, i.e., the establishment of departmental expense standards for control purposes. The first thing that is necessary is some historical experience in recording actual costs on the basis we have out-

ACCOUNTING CONTROLS

lined. The costs accumulated on this basis for a period of several months will give each operating department head an idea as to the amount of the expenses actually incurred for each monthly period so that he can relate each item of cost to some yardstick which is indicative of the volume of work performed in his responsibility. Whether this yardstick represents the number of pieces of paper handled, the number of units of product produced, or the number of hours worked makes no difference as long as the yardstick adequately measures volume.

The next step is to determine which expenses increase or decrease with volume, which are fixed and which are semivariable. Once this determination has been made the development of a sound budget can be started. Then sit down with the operating people (the people who actually run the department) and explain to them what a budget means and its purpose, what it can be used for, and how it is developed. This means explaining the content of each of the accounts and translating the accounts to the supervisor so that he in turn can relate them to actual activities in his department and see how and why they are variable, fixed or semi-variable. Labor costs are easily understood but other expenses are a little more difficult. It is absolutely necessary that each department head appreciate and realize what a particular expense account means when translated into services or materials utilized by him in the work for which he is responsible.

With the historical experience shown by the accounts it is possible for the department head to determine what costs are fair and reasonable at certain volume levels. He may conclude that the historical information is not representative, that it does not reflect attainable performance or is otherwise inadequate and that further studies may be required before a fair budget at various levels of operation can be determined. He may, for example, argue that the distribution of power costs to his responsibility has been based upon inadequate measurement and insisted that power consumption be metered or he may believe that tangible tool costs require engineering studies in order to obtain a satisfactory basis for relating tool consumption to products produced.

As the department head analyzes and develops these factors he becomes better acquainted with the account and with those factors which cause increases or decreases in his expenses. The

comparison of actual costs with his determination of a fair budgeted amount for such costs then becomes of real significance to him.

Perhaps the most important thing to keep constantly in mind in establishing budgets is the fact that budgets are built, shaped, developed and used by operating people, not by the Accounting Department. The operating head of a department is the one who must, in the final analysis, determine what the budget should be and how it should be calculated. If he does not prepare it or if he does not agree with the basis or method of computation, then the budget is of no value. Budgets furnished on this basis become effective tools for the control of operations, costs and expenses at the levels at which costs are incurred and at which operations are directed. This decentralization of control is essential to present day management and is the only effective method of obtaining control.

This brings us to the third and last problem, namely how to obtain effective use of this control information after it has been provided. Earlier in this discussion it was mentioned briefly that effective follow-up on favorable and unfavorable trends was essential.

Administrative personnel responsible for operations are busy people. They have many things they must watch constantly. They have personnel and technical problems in their operations, difficulties with materials, production schedules to meet and hundreds of administrative details to watch. A good many of them perhaps feel that it is a big enough job to get the work done without having to spend time studying reports and analyzing figures. One of the first things necessary is to make each supervisor or department head realize that the biggest trick in management is to get the job done at the stipulated cost, a cost which will produce a profit. Most anyone can bull a job through if cost is not a factor. The real measurement of an administrator's skill is in doing the job within the cost limitations he agreed he could meet.

But how are you going to get him to use the available control information? A good many very competent people have thought about this subject and a good many plans have been developed to insure automatically that proper attention is given to favorable and unfavorable trends in operation. This subject comes under the general heading of that group of management

ACCOUNTING CONTROLS

controls knowns as "Incentives" which for purposes of this discussion can be subdivided into two classifications. First, tangible incentives, namely those which reward the administrator through increased compensation and second, intangible incentives which offer other than compensation benefits. Modern management uses both of these effectively. The intangible incentive theory utilizes pride, prestige, sense of accomplishment and competitive interest to their fullest advantage. All of you have, in one way or another, used all of these to obtain results. While these incentives are powerful aids in creating cost consciousness, the improvement in performance and greater efficiency nevertheless the tangible or compensation incentives for administrative personnel seems, in actual practice to have been by far the most effective.

There are many methods and many bases upon which good supervisory incentive plans can be developed, all of which require careful study by people who know the pitfalls and problems involved in setting them up and keeping them effective.

One reasonably effective, but not automatic, method of promoting the utilization of reports is to establish a monthly review of the figures with each department head. I know of no better way to educate supervisory personnel in the practical use of control data than to have those responsible for the preparation of reports sit down with and point out to those who use them those factors in the presentation which appear to be significant. Those significant items can be investigated and proper corrective action taken. This procedure requires patience and constant treatment but will, over a period of time, develop an understanding of the report and stimulate prompt inquiry into the causes of budget variances.

However, to make certain that everything has been done to get effective use of available control information—first, we must be sure the control reports are simple and well presented; second, we must see that each supervisor understands the information he gets; third, we must point out significant items in discussions or in narrative digests of operating results; fourth, we must utilize the stimulus of intangible incentives, and fifth, we must provide as soon as practicable a soundly developed supervisory incentive plan.

Industrial Unrest Today

By Professor R. A. MAHONEY, B.A., M.B.A.

(Dept. of Commerce, U.B.C.)

The importance of personnel management has become increasingly prominent in every business enterprise, but too often the amount of money expended in efforts to improve industrial relations have not been justified by the results. Some of the problems which are obstructing good industrial relations are outlined by the author and a number of suggestions are given for more effective personnel management.

Industrial Relations in business have shown a peak of activity for the last three years. Business is now starting to ask the questions: "Are we accomplishing anything?" "Have we arrived at any of the right answers?"

In trying to answer these questions, it is important to realize that poor human relations in industry have existed for a great many years. The right answers are not to be found in a short time. There are so many complicating factors that the problem is extremely difficult. Increasing size and specialization of industry which tends to make jobs dull and uninteresting and to widen the gap between management and workers is one of these factors. Another is the problem of adjustment which is necessitated by government intervention in industry.

Closely allied to the problem of industrial unrest is the fact that, all over the world, the man on the street is beginning to recognize his own power. This recognition has come about through improved communication and transportation.

In addition, the average citizen is only now beginning to realize that the vote is a powerful weapon and it has been said that humanity, which is now able to govern its own political destiny, will never be content until it can govern its own economic destiny. Thus we have demands from employees for a voice in the conditions of work which directly affect them, such as wages, working conditions, etc.

This attitude on the part of employees is a hard pill for most industrialists to swallow. It involves a change in what management once considered its basic rights. Bitterness and even physical violence have resulted and, as long as the memory

INDUSTRIAL UNREST TO-DAY

of this continues on either side, industrial peace will be difficult to achieve.

Management's main efforts to obtain peaceful employee relations have taken the form of personnel departments and industrial relations experts. It is here that the greatest number of questions are being asked. Business wants to know—and quite rightly so—Is the expense of a personnel department justified in terms of improved morale and increased productivity? Too often the answer is "No". This is obvious when we hear of several large organizations which have spent large amounts on personnel work over the past ten years and in which employee morale is at an extremely low ebb.

The partial failure of personnel management was to be expected in part. It is a relatively new profession. Nevertheless, at this time, leading authorities in the field point to several reasons for poor results. Too much attention has been given to concrete benefits and not enough to sincere efforts to obtain workermanagement understanding. In other words, luxurious rest rooms, recreational facilities, etc., are not enough. Personnel management has emphasized techniques and systems to too great an extent. This has increased the feeling of the employee that he is merely a cog in a machine. Not enough information is being passed down the line to employees so that they may have an opportunity to understand management problems and ideas.

Finally, and most important, top management ideas and policies are not properly understood by lower levels of management. Therefore, a company which talks a wonderful personnel policy may, in practice, have a very poor personnel policy. The most important people in any personnel plan are the first and second line supervisors who have actual contact with employees.

There is, moreover, another problem running through all industrial relations. The problem of security cuts across all issues and is of great importance to all employees. Nevertheless, it must be remembered that a solution to the security problems must take into account the fact that there is a certain amount of conflict between security and free enterprise.

Despite all these problems, some progress is being made and will, we hope, continue to be made. Some of the bitterness and antagonism is disappearing. More responsible leadership in the ranks of labor and of management is being developed.

« STUDENT SECTION »

GENERAL ACCOUNTING

Comments by J. D. CAMPBELL, C.A., R.I.A.

ACCOUNTING II (1949)

QUESTION 2 (20 marks)

A, B and C are partners in a firm whose total capitalization is \$100,000 divided in the ratios 5: 3: 2 respectively. The partners allow interest on capital and salaries to the partners before dividing the balance of profits equally.

For the calendar year 1948, net profit before any credits to partners was \$50,000. The agreed interest rate on capital was 5% per annum. Salaries were payable as follows: A, \$5,000; B, \$5,000; C, \$10,000.

Partners' withdrawals during the year were total salaries plus A, \$500, and B, \$600. No interest is charged on excess drawings.

Required:

Schedules for submission to the partners showing:

- (a) Sharing of profits between the partners and the total amount credited to each partner.
- (b) Details of partners' current accounts showing balances withdrawable or to be contributed by partners as of December 31, 1948, in order to keep capitals at the amounts fixed by agreement.

Solution: (a) A., B. and C Statement of Distribution of Profits for year ended 31st, December, 1948 В C Total Interest on capital \$ 2,500 \$ 1,500 \$ 1,00% \$ 5,000 Salaries 5,000 5,000 10,000 20,000 Balance of profits 8,333 8,333 8,334 25,000 \$15,833 \$14,833 \$19,334 \$50,000 (b) A., B. and C. Statement of Amounts Withdrawable in order to keep Capitals at Fixed Amounts as at 31st, December, 1948 C Total A B Share of profits \$15,833 \$14,833 \$19,334 \$50,000 Withdrawals 5,500 5,600 10,000 21,100 Balance withdrawable at 31st December. 1948\$10,333 \$ 9,233 \$ 9,334 \$28,900

STUDENT SECTION

Comments

The overall picture in the answers submitted to this question was good. The fundamental errors which occurred were due to: (1) a failure to realize that the terms interest and salaries utilized in the partnership agreement were merely designation as to how the profit of the partnership was to be divided as between the partners; (2) a misinterpretation of the question resulting in providing for interest on salaries as well as capital; (3) a failure to understand the requirements of the: (b) division of the question; and (4) an arbitrary assumption that the remaining profits after interest and salary were to be divided in the ratio of their original capitals.

(As no information was given as to the profit and loss sharing ratio it was to be assumed that it was equal.)

In addition to the above, special attention might be directed to the form in which the answers were submitted. It should not be overlooked that the question required the submission of schedules. In a large number of cases, accounts alone were submitted whereas in other cases the form of the schedule was not entirely satisfactory. No penalties were applied in this latter case.

COST ACCOUNTING

Comments by A. V. HARRIS, C.A., R.I.A.

FUNDAMENTALS OF COST ACCOUNTING (1949)

QUESTION 5 (20 marks)

The Roxy Manufacturing Company keeps individual stock cards for each kind of raw material used:

Those cards have five sections:

- a-Ordered
- b-Received
- c-Issued
- d—Balance
- e-Reserved

The transactions for the month of September were:

- Sept. 1 Balance 1,500 units at 50c
 - 4 Reserved 1,300 units
 - 6 Ordered 1,700 units
 - 8 Issued 200 units
 - 11 Received 1,700 units order Sept. 6, cost \$935.
 - paid freight, \$35.00
 - 13 Ordered 500 units
 - 14 Received 500 units ordered Sept. 13, cost \$340.
 - 21 Reserved 850 units
 - 23 Issued 1,300 units reserved Sept. 4
 - 24 Returned to vendor 50 units received Sept. 14
 - 24 Reserved 500 units
 - 28 Issued 200 units
 - 28 Returned to stock 100 units issued Sept. 23

Prepare an appropriate Stock Card with the necessary entries, using the MOVING AVERAGE PRICING METHOD.

Solution, Question 5

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200 112. 56 1,950 1,086. 100 56. 56 2,050 1,142.	24		50	34.	.68	-	-	1		2,150	1,198.	.56
200 11256 1,950 1,086. 100 5656 2,050 1,142.	24		******	-:	:			:	200			
100 5656 2,050 1,142.	28	******	****	*****		200	112.	.56		1,950	1,086.	.56
	28	*******		*****		100	56.	.56		2,050	1,142.	

Comments on Question 5

The examiner was surprised that the preparation of a stock card caused so much difficulty. The average mark for this question was about 10 out of a possible 20. Points causing difficulty were the "reserved section", and the moving average price. The form of the card was generally satisfactory with little thought given to what was being represented—namely a stock card. Many developed a reserve section which required

much calculation to discover the value of goods on hand.

Acceptable alternatives in the solution were: (1) the segregation of the "reserved" items at the average price at the time of the reservation, rather than at the time of issue; (2) return to the supplier at the average cost rather than the cost at which the goods were admitted. A fully accurate solution would introduce fractions of dollars, but as is observed, these were not taken into account for this solution.

